

IN THE CLAIMS:

1. (*currently amended*) A method of measuring the quality of service provided to a remote-access user of a virtual private network, said virtual private network comprising a plurality of private network locations interconnected through a public data network, with the remote-access user including a VPN client device directly connected to said public data network, the method comprising the steps of:

- a) providing measurement software at a VPN client location;
- b) collecting, at the VPN client location, VPN performance information for each session attempt by the user, the VPN performance information including at least the data and time of each VPN connection attempt, the identity of the VPN server to which the VPN client is attempting to connect, any connection failure code and disconnection reason code;
- c) periodically uploading the collected VPN performance information to a centralized server connected between the VPN and said public data network;
- d) filtering, normalizing and storing the uploaded VPN performance information at the centralized server;
- e) analyzing the stored VPN performance information; and
- f) generating a report measuring the quality of service as defined by the analysis of the stored service information.

2. (*original*) The method as defined in claim 1 wherein the method further comprises the step of performing any required VPN service maintenance actions to correct communication problems included in the generated report.

**3. *cancelled***

4. (*currently amended*) The method as defined in claim 1 wherein step b) further comprises the collection of additional information related to VPN accessibility, VPN sustainability and VPN availability for each session attempt.

5. (*currently amended*) The method as defined in claim 1 wherein the method is utilized for a plurality of separate remote-access VPN client devices, the steps of analyzing and generating then based on data collected for each session attempt from the plurality of separate remote-access VPN client devices.

6. (*original*) The method as defined in claim 5 wherein at least one remote-access VPN client device comprises a persistent location VPN client device.

7. (*original*) The method as defined in claim 5 wherein at least one remote-access VPN client device comprises a transient location VPN client device.

8. (*original*) The method as defined in claim 5 wherein step f) includes the generation of an aggregate report based on the performance of the plurality of separate remote-access VPN client devices.

9. (*currently amended*) The method as defined in claim 1 wherein the collecting of step b) further comprises collecting information including such as: link type, session duration, IP port identity, type of VPN protocol, type of VPN encryption, identity of network nodes traversed between the VPN client and VPN server for each session attempt.

**10. – 15. *cancelled***

16. (*currently amended*) A VPN centralized network server for generating information related to the quality of VPN service experienced by remote-access VPN users, the server comprising:

an arrangement for receiving connect/disconnect information collected by one or more remote-access VPN clients for each session attempted by a selected remote-access VPN user;

a storage means for filter, normalizing and storing the received data;

an analysis element for reviewing the stored data to determine VPN performance for the selected remote-access VPN user; and

a report generation element, coupled to the analysis element, for providing information regarding the quality of service at one or more remote-access VPN clients for the selected remote-access VPN user.

17. (*currently amended*) A VPN centralized network server as defined in claim 16 wherein the analysis element reviews performance information, for each session attempted by each remote-access user, including VPN accessibility, VPN sustainability and VPN availability, where VPN accessibility is defined as the ability to connect to a VPN, VPN sustainability is defined as the ability to maintain a connection, and VPN

availability is defined as the ability of a persistent remote-access VPN location to maintain a persistent connection.

**18. (original)** A VPN centralized network server as defined in claim 16 wherein the server is capable of receiving connect/disconnect information from a plurality of separately located remote-access VPN client devices.

**19. (original)** A VPN centralized network server as defined in claim 18 wherein the server receives information from at least one persistent remote-access VPN client device.

**20. (original)** A VPN centralized network server as defined in claim 18 wherein the server receives information from at least one transient remote-access VPN client device.

**21. (currently amended)** A VPN centralized network servicee server as defined in claim 18 wherein the report generating element is capable of producing aggregate information associated with each session attempted by the plurality of separately located remote-access VPN client devices.